BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs. 3000000.00

Name of Work: Estimate for Providing and Maintenance of Borewells and Water Supply Pipelines at Ananthpura village, Balaji layout, DUO marvel, Prakruthi Layout, Ananthpura and surrounding areas in ward no 03, Attur

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its qualityf 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction **(P.48, I. 9.4) PRED.SR 2012-13**	Each BW	1				1		
							1	1938.46	1938.00
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) **P. 46 / I. 9.1 PRED SR 2012-13**	Rmtr							

	to 50 m		1	50.00			50.00	315.18	15759.00
	50 to 100 m		1	50.00			50.00	412.00	20600.00
	100 to 150 m		1	50.00			50.00	458.35	22918.00
	150 to 200 m		1	50.00			50.00	484.10	24205.00
	200 to 250 m		1	50.00			50.00	560.32	28016.00
	250 to 300 m		1	50.00			50.00	600.49	30025.00
3	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe - grade of Steel Fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7 mts both ends threaded confirming tio IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusive of all taxes and durties) Prices include Collar-medium duty **P. iii, I No. 84 PRED SR 2012-13**	Rmtr							
			1	70.00			70.00	1325.00	92750.00
4	Code No.: 3008 Providing 250mm dia PVC Pipe 10kg/cm **Page No. XXXV, SI No. 892 PWD SR 2018-19**	Rmtr							
			1	18.00			18.00	2203.39	39661.00
5	Providing and fixing Borewell Cap and Clamp Set **Page No. XLVII, SI No. 17 PWD SR 2018-19**	Set							
			1				1	1800.00	1800.00

6	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps **PWD SR 2018-19 P. XLI Item No. 35 including of all taxes**	No							
	12.5 HP 25 Stage		1				1	56414.00	56414.00
7	Providing GI Pipe 50 mm 'B' Class **Page No. XLVII, SI No. 1 PWD SR 2018-19**	m							
			1	260.00			260.00	415.00	107900.00
8	Providing Collar 50 mm **Page No. XLVII, SI No. 1 PWD SR 2018-19**	No							
			44				44.00	180.00	7920.00

	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100Volts as per IS-694:1990 & confirming to GTP of **GROUP-A. P. No. 12 / I No. 2.10.4(1) 3C x 4 Sqm mm KPWD Electrical SR 2014-15**	Mtr							
			1x2	270.00			540.00	126.70	68418.00
10	Labour charges for erection as new /repaired submercible pumpset allong with GI pipe (32/50mm) cable (new submercible pumpset if required will be supplied by the department free of cost and released pumpset shoud be handed over to department including transportation (Each lenth =6.00) **Page No. 558, Items No-3 BWSSB SR for 2014-15)**	Per Length							
	(270/6)=45.00		1	44.00			44	88.00	3872.00
11	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., **P No. 44 / I No. 6.6.6 KPWD Electrical SR 2014-15**	Each							
			1				1	302.00	302.00

	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A **P No. 55/ I No. 7.4.4 4 core 16 Sqmm KPWD Electrical SR 2014-15**	Mtr							
			1	30.00			30.00	140.40	4212.00
13	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. **P No. 61 / I No. 7.8.1 6Sqmm to 16 Sqmm) KPWD Electrical SR 2014-15**	Mtr							
			1	30.00			30.00	10.80	324.00
14	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) **P No. 61 / I. No. 7.9.3 KPWD Electrical SR 2014-15**	Mtr							
	For Cutting Road Surface		1	25.00			25.00	85.00	2125.00
15	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV **P. No. 62 / I No. 7.12.1 KPWD Electrical SR 2014-15**	Mtr							
	40mm dia GI pipe		1	4.00			4.00	345.00	1380.00
16	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc., **P. No. 62 / I.No. 7.13.2 KPWD Electrical SR 2014-15**	No.							
	16Sqmm		1				1.00	280.00	280.00

	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, **(P No. 55, I No. 7.1) KPWD Electrical SR 2014-15**	No							
			1				1	2727.00	2727.00
18	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.**P No. 44 / I No. 6.7.2 KPWD Electrical SR 2014-15**	No.							
	32 Amps		1x6				6	180.00	1080.00
19	Providing and fixing 50mm nominal bore gun metal non-return **Page No. XLVIII, Sl No. 16, PWD SR 2018-19**	Nos							
			1				1	1800.00	1800.00
20	Providing NP/CP waste unions conforming to ISI specifications and fixing them in position as per directions including cost of materials, fixtures and conveyance to work spot etc., complete.- for 50mm dia: **Page No. 97, Item No. 13.81.3 PWD SR 2018-19**	Each							
	50mm dia		1						
	Basic Rate	210.00					1	222.60	223.00
	Area Weightage @ 6%	12.60							
	Total	**222.60**							

	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. **5-32Amps Group A TPN P No. 47 / I No.6.16.5 KPWD SR 2014-15**	No							
			1				1	1547.00	1547.00
22	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete **P.No. 57, I. No. 6.41.2 KPWD Electrical SR 2014-15**	Sq.Cm							
	16SWG		1x2	120.00	60.00		14400.00		
			1	360.00	25.00		9000.00		
							23400.00	0.33	7722.00
23	Providing outdoor panel upto **15.00 HP (PWD SR for 2018-19 Page No. XLVII Sl No. 12)**	No.							
			1				1	15500.00	15500.00
24	Earthwork excavation for pipeline trenches including deporiting or bank up to a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in th following strructure manhole. **Page No. 01/ Item No.1.2.2 / PRED SR 2012-13 Hard Soil**	Cum							
			1	350.00	0.60	0.60	126.00		
							126.00	188.00	23688.00

25	Providing and instalation at site of works P.V.C.Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., **Page No.15 item No.3.4.2 b PRED SR 2012-13.**	Rmtr							
	75 mm dia 6 KSC PVC pipe		1	350.00			350.00		
							350.00	123.00	**43050.00**
26	Refilling the basement and pipeline treanches with secleted available earthe for trench excavation including authority condition in layers from thedi including disponsary of the sunplus earth with a heavy 200 mtrs **Page No. 3 / Item No. 1.6 / PRED SR 2012-13**	Cum							
	Basic Rate	61.00	Qty. Vide Item No. 24				**126.00**	61.00	**7686.00**
27	KSRB13-6.3-7 : Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) **65mm nominal bore** including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No.KBS 13.2.6 / 13.3. **P. No.94 / I. No. 13.38 PWD SR 2018-19**	Each							
			35						
	Basic Rate	2103.00					35	2229.18	78021.00
	Area Weightage @ 6%	126.18							
	Total	**2229.18**							
28	Lifting of Submersible pump set **(P.40/I.13) PRED SR (2013-14) P-56 I.No 3.21**	No.	40				40	850.00	34000.00
29	Transportation of pumping machineries PRED SR For 2012-13 **(P.41/I.14)PRED SR (2013-14) P.No 56 Item No 10-3-19**	No.	40				40	900.00	36000.00

	A) Repairs to Motor: Rewinding of submersible pump sets with copper insulation wire of suitable gauge as per ISI specification with guarantee of 6 months. PRED SR (2013-14) P No. 54/ I. No. A) (Above 5 HP upto 10HP add Rs.120/- for every ½ HP)	No.					40	3700.00	148000.00
	B) 10 HP Motor		40						
	upto 5 HP 2500.00								
	for 10 HP (120 x 10) 1200.00								
	Total 3700								
	111.00								
	3811.00								
	Maintenance of exisiting borewells								
	Replacement of Motor Parts:								
31	Stator (with one year Guarantee) P No. 55/ I No. C(1) PRED SR (2012-13) 10.3.3	No.	40				40	5050.00	202000.00
32	Rotor (with one year Guarantee) P No. 55/ I No. C(2) PRED SR (2013 14) 10.3.6	No.	40				40	4700.00	188000.00
33	Upper Flange P. No. 40 / I No. 10.3.7 PRED SR (2013-14)	No.	40				40	350.00	14000.00
34	Lower Housing P. No. 55 / I No.10.3.10PRED SR (2013-14)	No.	40				40	650.00	26000.00
35	Lower flange P. No. 40 / I No.5 PRED SR (2008-09)	No.	40				40	350.00	14000.00
36	a) Carbon Housing P. No. 56 / I No.10.3.12 PRED SR (2012-13)	No.	40				40	475.00	19000.00
37	b) Thrust bearing block assembly complete with Segment bearing pad.P. No. 40 / I No10.3.13PRED SR (2012-13	No.	40				40	1150.00	46000.00
38	c)Top Carbon /Ferrodo padding P. No. 56 / I No. PRED SR (2012-13)	No.	40				40	150.00	6000.00
39	Bearing (GunMetal) Centrifugal cast Aluminium Bronze, bearing bush P. No. 56/ I No10.3.16 PRED SR (2013-14)	No.	40				40	400.00	16000.00
40	Motor Base with pin P. No. 56 / I No.10.3.18 PRED SR (2013-14)	No.	40				40	470.00	18800.00
41	Re-erection charges of pumping machineries including overhauling and painting P. No. 56 / I No.50 PRED SR (2013-14)	No.	40				40	950.00	38000.00

42	Labour charges (overhauling only) **P. No. 55/ I No.10.3.22 PRED SR (2012-13)**	No.	40				40	550.00	22000.00
43	**C) Replacement of pump parts:** The following main components of submersible pump sets requiring replacement.								
44	Pump Bowls **P. No. 54 / I No.10.2.1 PRED SR (2013-14**	No.	40				40	700.00	28000.00
45	Intermediate piece (I.P) with IP leaded bronze bush **P. No. 54 / I No10.2.2 PRED SR (2012-13)**	No.	40				40	450.00	18000.00
46	Oil Seal **P. No. 39 / I No.B3 PRED SR (2008-09)**	No.	40				40	125.00	5000.00
47	Oil Seal Steel Bush **P. No. 54/ I No.10.24 PRED SR (2012-13)**	No.	40				40	150.00	6000.00
48	Guide vane **P. No. 54 / I No.10.2.5 PRED SR (2012-13)**	No.	40				40	175.00	7000.00
49	Impeller (Shell moulded with aluminium and Bronze) **P. No. 54/ I No.10.2.70 PRED SR (2012-13)**	No.	40				40	425.00	17000.00
	a) Discharge outlet (D.O) Bearing D.O Steel Bush **P. No.54 / I No.10.2.70 RDED SR (2012-13)**	No.	40				40	445.00	17800.00
51	b) D.O Bearing **P. No. 54 / I No.10.2.8 PRED SR (2012-13)**	No.	40				40	285.00	11400.00
52	Steel Bush (D.O.Steel bush) **P. No. 54 / I No.A710.2.9 PRED SR (2012-13)**	No.	40				40	150.00	6000.00
53	Allen Screw **P. No. 55 / I No.8 PRED SR (2012-13)**	No.	40				40	25.00	1000.00
54	Pump shaft made out of stainless steel Centreless ground with key way (upto 8 stages) **P. No. 55/ I No.10.2.11 PRED SR (2013-14))**	No.	40				40	950.00	38000.00
55	Pump key (Stainless steel) **P. No. 55 / I No.10.2.12 PRED SR (2012-13))**	No.	40				40	125.00	5000.00
56	Pump Coupling (Stainless steel) **P. No. 55/ I No.10.2.13PRED SR (2012-13)**	No.	40				40	250.00	10000.00
57	Non – return valve (NRV) assembly complete with rubber 'O' Ring **P. No. 55 / I No.10.2.14PRED SR (2012-13)**	No.	40				40	1350.00	54000.00
58	Cable Guard **P. No.55 / I No.10.2.15 PRED SR (2012-13)**	No.	40				40	150.00	6000.00

	trainer P. No. 55 / I No.10.2.16 'RED SR (2012-13)	No.	40				40	150.00	6000.00
	Brass Filter P. No. 55 / I No.10.2.17) PRED SR (2012-13)	No.	40				40	250.00	10000.00
	Supplying and fixing miniature circuit breakers/solaters on existing MCB distribution boards using necessary fixing materiasl wiring complete as requireds 5 to 30 amps triple pole with all lead and lift, loading, unloading and labour charges etc complete as per specifications	No.	45				45	1000.00	45000.00
2	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C cutouts and other equipments on the meter board using 40 mm dia 2.90 mm thick GI pipe 2.5 m long buried in a pit. The pit should be filled with equal propotion of solt and charocoal 150 mm alround the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size, as per ISI specification 7.3.3 IS 732 using 12 mm dia bolts, nuts, washers and check nuts, etc., the pipe shall have 16 throught holes of 122 mm dia, (PWD Electrical SR-1999-2000, P-66, I.No.7) KPWD Electrical SR 2007-08	No.	40				40	1950.00	78000.00

	Supplying of ISI marked galvanized mild steel tube (continously welded electric resistance welded (ERW) high frequency, induction welded (HFIW) Hot finished welded type of nominal bore given below screwed at both ends as per IS 554/1986 with latest amendments, pipes threaftes at one end and the other end protected asper specification in random lengths of 4 to 7 mtrs Confirming to IS 1239 part I/1990 with amendament 1-5 and with all its latest amendements if any. The pipes supplied should be with BIS mark No 3/08-09 2406/15.10.2008. 50 mm dia including Collar Heavy Class 2016-17, P-90, i.no13.15	No.	1	600.00			600	431.00	258600.00
64	GI Collers	No.	80				80	100.00	8000.00
65	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and sheathed suitable for working voltage upto 1100 Volts. P. No. 46/ I No. 30-B 4.0 Sqm mm of 36 strands 0.3mm dia Group - A KPWD Electrical SR 2007-08 3/2008-09 4538/19.01.2009 (1x3x4.00 Sqmm PVC cable)	mtr	2	500.00			1000	151.00	151000.00
	E) General Items								
66	KSRB 2-2.2 : Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in hard soil not exceeding 1.5m , in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. specification, specification. No. KBS 2.1(b) / 2.3.5, No. 5/ Item No. 2.4/ PWD SR 2018-2019	Cum							

			1	800.00	0.50	0.80	320.00		
							320.00	484.92	155174.40
	Basic Rate	449.00							
	Area Weightage @ 8%	35.92							
	Total	484.92							
67	Providing and instalation at site of works P.V.C. Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.3 item No.4.2 **PRE SR 2016-17**	Rmtr							
	75mm Dia 6 KSC		1	800.00			800.00	161.71	129368.00
68	KSRB 2-4 ; Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50mm, and lift upto 1.5m, including cost of all labour complete as per specifications, No. 6/ Item No. 2.11/ PWD SR 2018-2019	Cum							
			Qty. Vide Item No. 33				320.00	76.32	24422.40
	Basic Rate	121.00							
	Area Weightage @ 8%	7.26							
	Total	128.26							
69	Labour charges for attending to repairs of the P.V.C pipes by earth work excavation, cutting the old pipe, installation and jointing of new pipes to the existing old pipe to the depth, line and level, perfect linking at joints including encasing the pipes alround to a depth of not less than 15 cm with earth available and refilling the excavated trenches giving satisfactory hydraulic test et., complete (Excluding the cost of materials) **(P.6/I.9 PRED SR - 2016-17)**	Each							
			250				250	150.38	37595.00
							TOTAL		2675022.80
							GST 12%		321002.74

70	Miscellaneous and Unforeseen Charges						L/S	3974.46
							Total	3000000.00
(Rupees thirty lakhs only)								

CERTIFICATE

1 The work spot has been inspected and the work is found necessary.

2 This Estimate is prepared as per C.S.R. of PWD 2018-19 PWD Elecrical 2017-18, PRED 2017 -18& RDED SR 2014-15 & SE RDED approved Rate.

3 The provisions were made in this estimate are necessary and adequate.

4 This work come under B.B.M.P. limits.

Assistant Engineer
ward No 03

Assistant Executive Engineer
Bruhat Bangalore Mahanagara Palike
Yelahanka Satellite Town Sub Division

Executive Engineer
Bruhat Bangalore Mahanagara Palike
Yelahanka Division

Administrative Approval
Accorded For ...30.00 lac
Head of A/C.....
CER NO :...212... Dt:25-02-19

TA CE (YNK)

Technical Sanction
Accorded For ...30.00 lac
Head of A/C.....
CER NO :...301... Dt:25-02-19

TA CE (YNK).